

Notice of Allowability	Application No.	Applicant(s)	
	10/533,096	KEYSER ET AL.	
	Examiner	Art Unit	
	Jafar Parsa	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an application filed on 7/14/2005.
2. ☒ The allowed claim(s) is/are 18-31 (renumbered 1-14 respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>4/27/2005</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

IN THE SPECIFICATION:

1. A heading entitled "Brief Description of Drawings" has been inserted on page 4 between lines 29 and 30.

The following is an examiner's statement of reasons for allowance:

Applicants' claimed invention is directed to a process for producing synthesis gas, the process including in a gasification stage, gasifying a carbonaceous feedstock in the presence of steam and oxygen and at a temperature below an ash fusion temperature of the carbonaceous feedstock to provide a raw synthesis gas which includes at least H₂, CO, CH₄, higher hydrocarbons, tars and solids;

feeding the raw synthesis gas, including higher hydrocarbons, tars and solids, to a partial oxidation stage; and

in the partial oxidation stage, partially oxidizing the CH₄ to produce CO and H₂ and cracking and combusting the tars and higher hydrocarbons by subjecting the raw synthesis gas to partial oxidation in the presence of oxygen thereby to provide an upgraded synthesis gas which is substantially free of heavier hydrocarbons and which includes less CH₄ than the raw synthesis gas.

US patent 4,199,327 to Hempill et al is directed to a coal gasification process wherein, Coarse, graded coal is fed to a pressurized relatively fixed bed, non-slugging gasifier from which crude gas is recovered. Fine coal is slurried in an aqueous mixture comprising the discharge from the relatively fixed bed gasifier, which discharge is composed of hydrocarbons, phenolic water and other liquids as major components and additional makeup water, if required, and the slurry is fed to a slugging, pressurized entrained flow gasifier from which additional crude gas is recovered. The two streams of gas are cleaned and then used to meet a variety of demands, including, but not limited to, gas turbine generation of electric power, manufacture of synthetic natural gas and manufacture of methanol.

The difference between Hempill and the claimed invention is that instant claims require feeding a raw synthesis gas obtained from non-slugging gasifier which includes at least H_2 , CO , CH_4 , higher hydrocarbons, tars and solids to a partial oxidation stage in order to oxidizing the CH_4 to produce CO and H_2 and cracking and combusting the tars and higher hydrocarbons by subjecting the raw synthesis gas to partial oxidation in the presence of oxygen thereby to provide an upgraded synthesis gas which is substantially free of heavier hydrocarbons and which includes less CH_4 than the raw synthesis gas.

In contrast, Hampill separate the crude gas obtained from the coarse, coal gasification and passing the crude gas through scrubbers and through condensers to remove particulates and condensable components from the impurities as a liquid stream and to a first gas purification system for removal of hydrogen sulfide. In the second stage, fine fraction of coal along with liquid stream obtained from the non-slugging

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gasifier fed to a slagging gasifier to obtain a second crude gas and the second crude gas is passed through a gas clean up system to obtain a second clean gas product. Therefore, Hempill neither teaches nor suggests feeding a raw synthesis gas obtained from non-slagging gasifier which includes at least H_2 , CO , CH_4 , higher hydrocarbons, tars and solids to a partial oxidation stage in order to oxidizing the CH_4 to produce CO and H_2 and cracking and combusting the tars and higher hydrocarbons by subjecting the raw synthesis gas to partial oxidation in the presence of oxygen thereby to provide an upgraded synthesis gas which is substantially free of heavier hydrocarbons and which includes less CH_4 than the raw synthesis gas. Nor would it have been obvious to modify the process of the prior art to arrive at the instant invention. There is no motivation to do so.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jafar Parsa whose telephone number is (571)272-0643. The examiner can normally be reached on 8 a.m.-4:30 p.m. (M-F).

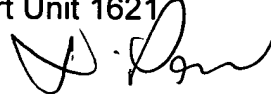
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571)272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP

Jafar Parsa
Primary Examiner
Art Unit 1621



J. PARSA
PRIMARY EXAMINER